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SF(H) 18-A

Operating instructions en
Mode d'emploi fr
Manual de instrucciones es
Manual de instruções pt

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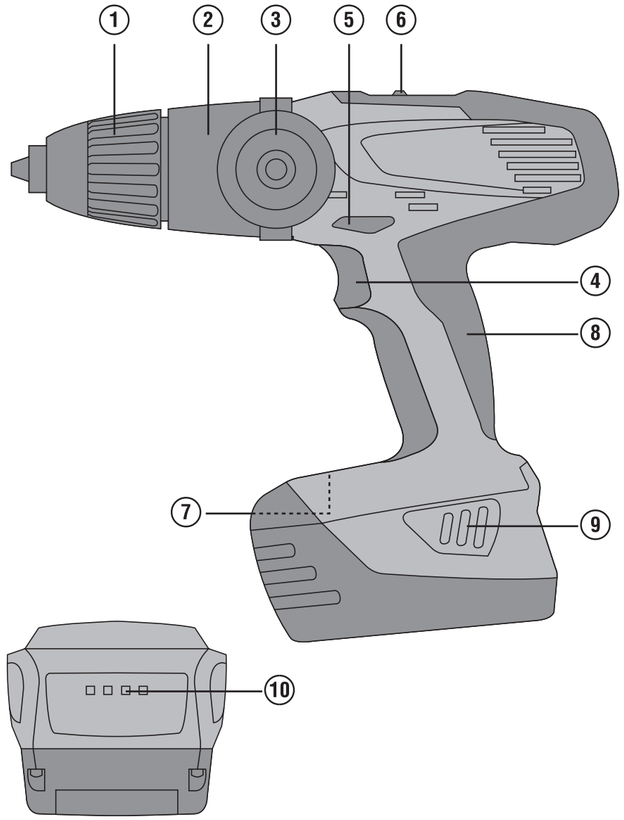

This product is UL listed to US and Canadien safety standards
Ce produit est homologué UL (conforme aux normes de sécurité américaines et candiennes)
Producto homologado según normas de seguridad americanas y canadienses
Produto homologado de accordo com as normas de segurança americanas e canadianas

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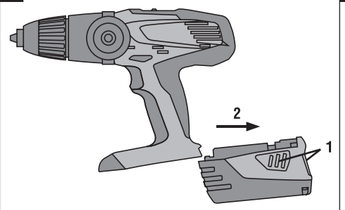

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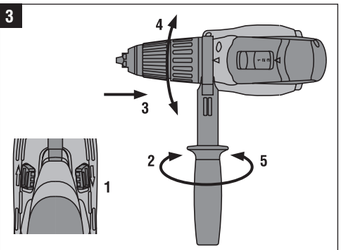

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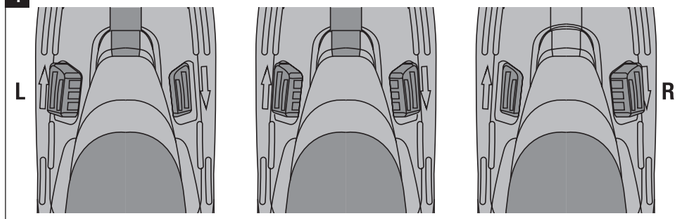

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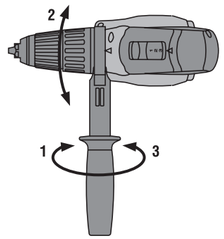

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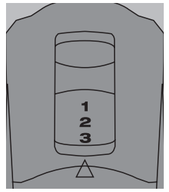

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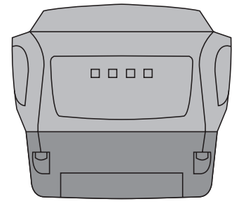

ORIGINAL OPERATING INSTRUCTIONS

SF(H) 18-A Cordless drill/driver / cordless hammer drill/driver

en

It is essential that the operating instructions are read before the power tool is operated for the first time.

Always keep these operating instructions together with the power tool.

Ensure that the operating instructions are with the power tool when it is given to other persons.

Contents	Page
1. General information	1
2. Description	2
3. Insert tools, accessories	4
4. Technical data	4
5. Safety instructions	5
6. Before use	8
7. Operation	9
8. Care and maintenance	10
9. Troubleshooting	11
10. Disposal	12
11. Manufacturer's warranty - tools	13

1 These numbers refer to the corresponding illustrations. The illustrations can be found on the fold-out cover pages. Keep these pages open while studying the operating instructions.
In these operating instructions, the designation "power tool" refers to the SF 18-A cordless drill/driver or SFH 18-A cordless hammer drill/driver with battery fitted.

Parts, operating controls and indicators 1

① Keyless chuck
② Setting ring for torque, drilling and hammer drilling
③ Side handle
④ Control switch (with electronic speed control)
⑤ Forward / reverse selector switch with transport lock
⑥ 3-speed gear selector
⑦ Type identification plate
⑧ Grip
⑨ Release buttons with additional function (charge status display activation)
⑩ Charge status and fault display (Li-ion battery)

1. General information

1.1 Safety notices and their meaning

DANGER
Draws attention to imminent danger that could lead to serious bodily injury or fatality.

WARNING
Draws attention to a potentially dangerous situation that could lead to serious personal injury or fatality.

CAUTION
Draws attention to a potentially dangerous situation that could lead to slight personal injury or damage to the equipment or other property.

NOTE
Draws attention to an instruction or other useful information.

1.2 Explanation of the pictograms and other information

Warning signs

General warning

Warning: electricity

Warning: caustic substances

en

Obligation signs

Wear eye protection

Wear a hard hat

Wear ear protection

Wear protective gloves

Wear breathing protection

Symbols

Read the operating instructions before use

V
Volts

Direct current

n_0
Rated speed under no load

/min
Revolutions per minute

Hammer drilling

Drilling without hammering

Return waste material for recycling.

Location of identification data on the power tool

The type designation can be found on the type identification plate at the base of the power tool and the serial number on the side of the casing. Make a note of this data in your operating instructions and always refer to it when making an enquiry to your Hilti representative or service department.

Type:

Generation: 01

Serial no.:

2. Description

2.1 Use of the product as directed

The SF 18-A is a hand-held, cordless drill/driver for driving and removing screws and for drilling in steel, wood and plastic.
The SFH 18-A is a hand-held, cordless hammer drill/driver for driving and removing screws, for drilling in steel, wood and plastic and for hammer drilling in lightweight concrete and masonry.
Working on materials hazardous to the health (e.g. asbestos) is not permissible.
Do not use the battery as a power source for other unspecified appliances.
Modification of the power tool or tampering with its parts is not permissible.
To avoid the risk of injury, use only genuine Hilti accessories and insert tools.
Observe the information printed in the operating instructions concerning operation, care and maintenance.
The power tool is designed for professional use and may be operated, serviced and maintained only by trained, authorized personnel. This personnel must be informed of any special hazards that may be encountered. The power tool and its ancillary equipment may present hazards when used incorrectly by untrained personnel or when used not as directed.
The working environment may be as follows: construction site, workshop, renovation, conversion or new construction.

2.2 Chuck

Keyless chuck

2.3 Switches

Control switch with electronic speed control
3-speed gear selector
Forward / reverse selector switch with transport lock
Setting ring for torque, drilling and hammer drilling

2.4 Grips

Pivotable side handle
Vibration-absorbing grip

2.5 Lubrication

Grease lubrication

2.6 The items supplied include (toolbox versions):

1 Power tool
1 Side handle
1 Operating instructions
1 Hilti toolbox

2.7 The items supplied include (cardboard box versions):

1 Power tool
1 Side handle
1 Operating instructions

2.8 Additional items required for operating the tool

B 18/2.6 Li-ion battery with C 4/36 or C 4/36-ACS or C 4/36-ACS TPS charger

2.9 Li-ion battery charge status and overheating indicator

LEDs light constantly	LEDs blink	Charge status C
LED 1,2,3,4	-	C ≧ 75 %
LED 1,2,3	-	50 % ≦ C < 75 %
LED 1,2	-	25 % ≦ C < 50 %
LED 1	-	10 % ≦ C < 25 %
-	LED 1	C < 10 %
-	LED 1	Battery overheated

2.10 Power tool overloading and overheating indicator

The power tool is equipped with an electronic protection system to prevent overloading and overheating. The power tool switches itself off automatically in the event of overloading and overheating. After releasing the control switch, the power tool may not restart immediately when the switch is pressed again (while the power tool is cooling down).

LEDs light constantly	LEDs blink	Power tool status
-	LED 1,2,3,4	Power tool overloaded or overheated

3. Insert tools, accessories

Bit holder	S-BH 50
Charger for Li-ion batteries	C 4/36
Charger for Li-ion batteries	C 4/36-ACS
Charger for Li-ion batteries	C 4/36-ACS TPS
Battery	B 18/2.6 Li-ion

Keyless chuck clamping range	Ø 1.5…13 mm (1/16" to 1/2")
Drilling diameter range in wood (soft)	Ø 1.5…32 mm (1/16" to 1 1/4")
Drilling diameter range in wood (hard)	Ø 1.5…20 mm (1/16" to 3/4")
Drilling dia. range in metal	Ø 1.5…13 mm (1/16" to 1/2")
Wood screws (max. length 240 mm)	Ø 3…10 mm (1/8" to 3/8")
Driving screws in plastic anchors (max. length 120 mm)	Ø Max. 10 mm (max. 3/8")

4. Technical data

Right of technical changes reserved.

Power tool	SF 18-A	SFH 18-A
Rated voltage (DC voltage)	21.6 V	21.6 V
Weight of power tool	2.5 kg (5.5 lb)	2.6 kg (5.7 lb)
Dimensions (L x W x H)	248 mm (9.77") x 92 mm (3.62") x 244 mm (9.61")	265 mm (10.43") x 92 mm (3.62") x 244 mm (9.61")
Speed in 1st gear	0…370/min	0…370/min
Speed in 2nd gear	0…1,250/min	0…1,250/min
Speed in 3rd gear	0…2,140/min	0…2,140/min
Torque with tool set to drilling symbol (soft/flexible joint)	Max. 50 Nm (444 in/lbs)	Max. 50 Nm (444 in/lbs)
Torque range (15 settings)	2…12 Nm (12 in/lbs...108 in/lbs)	2…12 Nm (12 in/lbs...108 in/lbs)
Hammering speed when drilling in 3rd gear		39,000/min
Hammer drilling in masonry (max. length 100 mm)		Ø 4…12 mm (1/8"...1/2")

Battery	B 18/2.6 Li-ion
Rated voltage	21.6 V
Capacity	2.6 Ah
Energy content	56.16 Wh

Battery	B 18/2.6 Li-ion
Weight	0.78 kg (1.72 lb)
Temperature monitoring	Yes
Type of cell	Lithium-ion
No. of cells	12

5. Safety instructions

NOTE
The safety rules in section 5.1 contain all general safety rules for power tools which, in accordance with the applicable standards, require to be listed in the operating instructions. Accordingly, some of the rules listed may not be relevant to this tool.

5.1 General power tool safety warnings

WARNING! Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. **Save all warnings and instructions for future reference.** The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

5.1.1 Work area safety

a) **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

5.1.2 Electrical safety

a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
b) **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

5.1.3 Personal safety

a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
b) **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.

f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.

g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

5.1.4 Power tool use and care

a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.

b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.

d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.

e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

5.1.5 Battery tool use and care

a) **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

b) **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

c) **When battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.

d) **Under abusive conditions, liquid may be ejected from the battery, avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.

5.1.6 Service

a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

5.2 Additional safety instructions

5.2.1 Personal safety

a) **Wear ear protectors with impact drills.** Exposure to noise can cause hearing loss.

b) **Use auxiliary handles supplied with the tool.** Loss of control can cause personal injury.

c) **Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.

d) **Keep the grips dry, clean and free from oil and grease.**

e) **Improve the blood circulation in your fingers by relaxing your hands and exercising your fingers during breaks between working.**

f) **Avoid touching rotating parts. Switch the power tool on only after bringing it into position at the workpiece.** Touching rotating parts, especially rotating insert tools, may lead to injury.

g) **Activate the safety lock (forward / reverse switch in the middle position) before storing or transporting the power tool.**

h) **The appliance is not intended for use by children, by debilitated persons or those who have received no instruction or training.**

i) **Children must be instructed not to play with the appliance.**

j) **WARNING: Some dust created by grinding, sanding, cutting and drilling contains chemicals known to cause cancer, birth defects, infertility or other reproductive harm; or serious and permanent respiratory or other injury.** Some examples of these chemicals are: lead from lead-based paints, crystalline silica from bricks, concrete and other masonry products and natural stone, arsenic and chromium from chemically-treated lumber. Your risk from these exposures varies, depending on how often you do this type of work. **To reduce exposure to these chemicals, the operator and bystanders should work in a well-ventilated area, work with approved safety equipment, such as respiratory protection appropriate for the type of dust generated, and designed to filter out microscopic particles and direct dust away from the face and body. Avoid prolonged contact with dust. Wear protective clothing and wash exposed areas with soap and water.** Allowing dust to get into your mouth, eyes, or to remain on your skin may promote absorption of harmful chemicals.

5.2.2 Power tool use and care

a) **Secure the workpiece. Use clamps or a vice to secure the workpiece.** The workpiece is thus held more securely than by hand and both hands remain free to operate the power tool.

b) **Check that the insert tools used are compatible with the chuck system and that they are secured in the chuck correctly.**

5.2.3 Battery tool use and care

a) **Ensure the switch is in the off position before inserting battery pack.** Inserting the battery pack into power tools that have the switch on invites accidents.

b) **Do not expose batteries to high temperatures or fire.** This presents a risk of explosion.

c) **Batteries must not be opened or dismantled, squashed, heated to temperatures over 100°C or incinerated.** A risk of fire, explosion or injury through contact with caustic substances may otherwise result.

d) **Avoid ingress of dampness.** Dampness may cause a short circuit resulting in a risk of burning injury or fire.

e) **Do not use batteries other than those approved for use with the applicable power tool or appliance.** Use of other batteries or use of the battery for purposes for which it is not intended presents a risk of fire and explosion.

f) **Observe the special instructions applicable to the transport, storage and use of Li-ion batteries.**

g) **Avoid short-circuiting the battery. Check that the terminals on the battery and in the power tool are free from foreign objects before inserting the battery in the power tool.** Short circuiting the battery terminals presents a risk of fire, explosion and chemical burns.

h) **Do not charge or continue to use damaged batteries (e.g. batteries with cracks, broken parts, bent or pushed-in and/or pulled-out contacts).**

i) **Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a “live” wire will make exposed metal parts of the tool “live” and shock the operator.

5.2.4 Electrical safety

Before beginning work, check the working area (e.g. using a metal detector) to ensure that no concealed electric cables or gas and water pipes are present. External metal parts of the power tool may become live, for example, when an electric cable is damaged accidentally. This presents a serious risk of electric shock.

5.2.5 Work area

a) **Ensure that the workplace is well lit.**

b) **Ensure that the workplace is well ventilated.** Exposure to dust at a poorly ventilated workplace may result in damage to the health.

5.2.6 Personal protective equipment

The user and any other persons in the vicinity must wear ANSI Z87.1-approved eye protection, a hard hat, ear protection, protective gloves and breathing protection while the power tool is in use.

6. Before use

6.1 Battery use and care

NOTE

Battery performance drops at low temperatures. Use a battery only when it has been fully charged. This ensures that maximum battery capacity is available. Change to the second battery as soon as a drop in performance is noticed. Recharge the battery immediately so that it is ready for reuse.

Store the battery in a cool, dry place. Never store the battery where it is exposed to direct sunlight or sources of heat, e.g. on heaters / radiators or behind a motor vehicle windscreen. Batteries that have reached the end of their life must be disposed of safely and correctly to avoid environmental pollution.

6.2 Charging the battery

DANGER

Use only the Hilti batteries and Hilti chargers listed under "Accessories".

6.2.1 Charging a new battery for the first time

Charge the battery fully before using it for the first time.

6.2.2 Charging a previously used battery

Ensure that the outer surfaces of the battery are clean and dry before inserting it in the corresponding charger.

Read the operating instructions for the charger for further information about the charging procedure.

Li-ion batteries are ready for use at any time, even when only partly charged. Charging progress is indicated by the LED display (see charger operating instructions).

6.3 Fitting the battery

CAUTION

Before fitting the battery, check that the power tool is switched off and that the transport lock is engaged (forward/reverse switch in the middle position). Use only the Hilti batteries approved for use with this power tool.

CAUTION

Check that the terminals on the battery and in the power tool are free from foreign objects before inserting the battery in the power tool.

1. Push the battery into the power tool from the rear as far as it will go and until it is heard to engage with a double click.
2. **CAUTION A falling battery may present a risk of injury to yourself or others.**
   Check that the battery is seated securely in the power tool.

6.4 Removing the battery 2

1. Press both battery release buttons.
2. Pull the battery out of the power tool toward the rear.

6.5 Fitting the side handle 3

1. Set the forward / reverse switch to the middle position (transport lock) or remove the battery from the power tool.
2. Release the side handle clamping band by turning the handle counterclockwise.
3. Slide the side handle clamping band over the chuck and onto the clamping section at the front end of the power tool.
4. Pivot the side handle into the desired position.
5. Secure the side handle by turning the grip clockwise.
6. Check that the side handle holds securely.

7. Operation

CAUTION
The tool may get hot during use. **Wear protective gloves.**

CAUTION
The power tool may suddenly swing to the side (rotate about its own axis) when drilling, hammer drilling or screwdriving. Always use the power tool with the side handle fitted and hold it securely with both hands.

CAUTION
To avoid injuries caused by the insert tool, wear protective gloves when changing insert tools.

7.1 Setting forward or reverse rotation 4

NOTE
The forward / reverse switch is used to select the direction of rotation of the drive spindle. An interlock prevents switching while the motor is running. The control switch is locked when the forward / reverse switch is in the middle position. Push the forward / reverse switch to the right (power tool held in working direction) to select forward rotation. Push the forward / reverse switch to the left (power tool held in working direction) to select reverse rotation.

7.2 Adjusting the side handle 5

1. Release the side handle clamping band by turning the handle counterclockwise.
2. Pivot the side handle into the desired position.
3. Tighten the side handle by turning the grip clockwise.
4. Check that the side handle holds securely.

7.3 Speed selection with the 3-gear switch 6

NOTE
The mechanical 3-speed gear switch can be used to select the speed range required. Speed with fully-charged battery. 1st gear: 0-370 /min, 2nd gear: 0-1120 /min or 3rd gear: 0-2090 /min

7.4 Switching on / off

Speed of rotation can be controlled smoothly up to maximum speed by pressing the control switch slowly.

7.5 Fitting the drill bit

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Check that the connection end of the drill bit is clean. Clean the connection end if necessary.
3. Insert the drill bit in the keyless chuck and then turn the chuck firmly by hand until several clicks are heard.
4. Check that the drill bit is held securely.

7.6 Removing the drill bit

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Open the keyless chuck.
3. Pull the insert tool out of the chuck.

7.7 Drilling

CAUTION

Use clamps or a vice to secure the workpiece. The workpiece is thus held more securely than by hand and both hands remain free to operate the power tool.

1. Turn the torque and operating mode setting ring to the drilling symbol.
2. Move the forward / reverse switch to the “Forward” position.

7.8 Hammer drilling (SFH 18-A)

1. Turn the torque and operating mode setting ring to the hammer drilling symbol.
2. Move the forward / reverse switch to the “Forward” position.

7.9 Screwdriving

7.9.1 Fitting the bit holder / bit

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Open the quick-release chuck.
3. Insert the bit adapter in the keyless chuck and then turn the chuck firmly by hand until tight.
4. Check that the bit adapter is held securely (check by pulling).
5. Fit the bit in the bit holder.

7.9.2 Screwdriving

1. Turn the torque, drilling and hammer drilling setting ring to the required torque setting.
2. Set the forward / reverse switch to the desired direction of rotation.

7.9.3 Removing the bit / bit holder

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Remove the bit from the bit holder.
3. Open the keyless chuck.
4. Remove the bit adapter.

7.10 Reading the charge status LED display on Li-ion batteries 7

NOTE

The charge status cannot be indicated while the power tool is in operation. If LED 1 blinks, this indicates that the battery is either fully discharged or too hot (temperature above 80°C/ 176°F). The battery must then be inserted in the charger. If all 4 LEDs blink, this indicates that the power tool has been overloaded or has overheated.

The Li-ion battery features a charge status LED display. The charge status is indicated by the LEDs on the battery during charging (please refer to the operating instructions for the charger). When the battery is not in use, pressing one of the battery release buttons or inserting the battery into the power tool causes the battery charge status to be displayed by the four LEDs for three seconds.

8. Care and maintenance

CAUTION

Before beginning cleaning, remove the battery from the power tool in order to prevent unintentional starting.

8.1 Care of insert tools

Clean off dirt and dust deposits adhering to the insert tools and protect them from corrosion by wiping the insert tools from time to time with an oil-soaked rag.

8.2 Care of the power tool

CAUTION

Keep the power tool, especially its grip surfaces, clean and free from oil and grease. Do not use cleaning agents which contain silicone.

The outer casing of the power tool is made from impact-resistant plastic. Sections of the grip are made from a synthetic rubber material.

Never operate the power tool when the ventilation slots are blocked. Clean the ventilation slots carefully using a dry brush. Do not permit foreign objects to enter the interior of the power tool. Clean the outside of the power tool at regular intervals with a slightly damp cloth. Do not use a spray, steam pressure cleaning equipment or running water for cleaning. This may negatively affect the electrical safety of the power tool.

8.3 Care of the Li-ion battery

Avoid entrance of moisture.
Charge the battery fully before using it for the first time.
In order to achieve maximum battery life, stop discharging the battery as soon as a significant drop in performance is noticed.
NOTE
If use of the power tool continues, battery discharge is stopped automatically (indicated by LED 1 blinking) before the battery cells suffer damage.

Charge the battery with the Hilti charger approved for use with Li-ion batteries.
NOTE
- A conditioning charge (as is required with NiCd or NiMH batteries) is not necessary.
- Interruption of the charging procedure has no negative effect on battery life.
- Charging can be started at any time with no negative effect on battery life. There is no memory effect (as with NiCd or NiMH batteries).
- For best results, batteries should be stored fully charged in a cool dry place. Avoid charging the battery in places subject to high ambient temperatures (e.g. at a window) as this has an adverse effect on battery life and increases the rate of self-discharge.
- If the battery no longer reaches full charge, it may have lost capacity due to aging or overstressing. It is possible to continue working with a battery in this condition but it should be replaced in good time.

8.4 Maintenance

WARNING
Repairs to the electrical section of the power tool may be carried out only by trained electrical specialists.

Check all external parts of the power tool for damage at regular intervals and check that all controls operate faultlessly. Do not operate the power tool if parts are damaged or when the controls do not function faultlessly. If necessary, the power tool should be repaired by Hilti Service.

8.5 Checking the power tool after care and maintenance

After carrying out care and maintenance work on the power tool, check that all protective and safety devices are fitted and that they function faultlessly.

9. Troubleshooting

Fault	Possible cause	Remedy
The power tool doesn't run.	The battery is discharged or fitted incorrectly.	The battery must be heard to engage with a double click or, respectively, needs to be charged.
	Electrical fault.	Remove the battery from the power tool and contact Hilti Service.
The power tool doesn't run and all 4 LEDs blink.	The power tool has been overloaded.	Release the control switch and press it again.
	The overheating prevention cut-out has been activated.	Allow the power tool to cool down. Clean the ventilation slots.
The power tool doesn't run and 1 LED blinks.	The battery is discharged.	Change the battery and recharge the discharged battery.
	The battery is too hot or too cold.	Bring the battery to the recommended working temperature.

Fault	Possible cause	Remedy
No hammering action.	The torque and operating mode setting ring are not set to the hammer drilling symbol.	Turn the torque and operating mode setting ring to the hammer drilling symbol.
The on / off switch can't be pressed, i.e. the switch is locked.	The forward / reverse switch is in the middle position (transport lock engaged).	Push the forward / reverse switch to the left or right.
The battery runs down more quickly than usual.	Battery condition is not optimal.	Have battery condition diagnosed by Hilti Service or replace with a new battery.
The battery doesn't engage with an audible double click.	The retaining lugs on the battery are dirty.	Clean the retaining lugs and check that the battery engages securely. Contact Hilti Service if the problem persists.
The power tool or the battery gets very warm.	Electrical fault.	Switch the power tool off immediately, remove the battery and contact Hilti Service.
	The power tool has been overloaded (application limits exceeded).	Use the right power tool for the job (don't use a low-powered tool for heavy work).

10. Disposal

CAUTION
Improper disposal of the equipment may have serious consequences: The burning of plastic components generates toxic fumes which may present a health hazard. Batteries may explode if damaged or exposed to very high temperatures, causing poisoning, burns, acid burns or environmental pollution. Careless disposal may permit unauthorized and improper use of the equipment. This may result in serious personal injury, injury to third parties and pollution of the environment.

CAUTION
Dispose of defective batteries without delay. Keep them out of reach of children. Do not attempt to open or dismantle batteries and do not dispose of them by incineration.

CAUTION
Dispose of the batteries in accordance with national regulations or return them to Hilti.

Most of the materials from which Hilti power tools or appliances are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, Hilti has already made arrangements for taking back your old power tools or appliances for recycling. Please ask your Hilti customer service department or Hilti representative for further information.

Batteries

Hilti Li-ion batteries contain lithium-ion cells.

Both you and Hilti bear responsibility for the recycling of worn-out batteries in keeping with environmental protection requirements.

Do not throw worn-out batteries into household waste, a fire or water.

11. Manufacturer's warranty - tools

Hilti warrants that the tool supplied is free of defects in material and workmanship. This warranty is valid so long as the tool is operated and handled correctly, cleaned and serviced properly and in accordance with the Hilti Operating Instructions, and the technical system is maintained. This means that only original Hilti consumables, components and spare parts may be used in the tool.

This warranty provides the free-of-charge repair or replacement of defective parts only over the entire lifespan of the tool. Parts requiring repair or replacement as a result of normal wear and tear are not covered by this warranty.

Additional claims are excluded, unless stringent national rules prohibit such exclusion. In particular, Hilti is not obligated for direct, indirect, incidental or consequential damages, losses or expenses in connection with, or by reason of, the use of, or inability to use the tool for any purpose. Implied warranties of merchantability or fitness for a particular purpose are specifically excluded.

For repair or replacement, send the tool or related parts immediately upon discovery of the defect to the address of the local Hilti marketing organization provided.

This constitutes Hilti's entire obligation with regard to warranty and supersedes all prior or contemporaneous comments and oral or written agreements concerning warranties.

HILTI

SID/SIW 14-A/18-A

Operating instructions
Mode d’emploi
Manual de instrucciones

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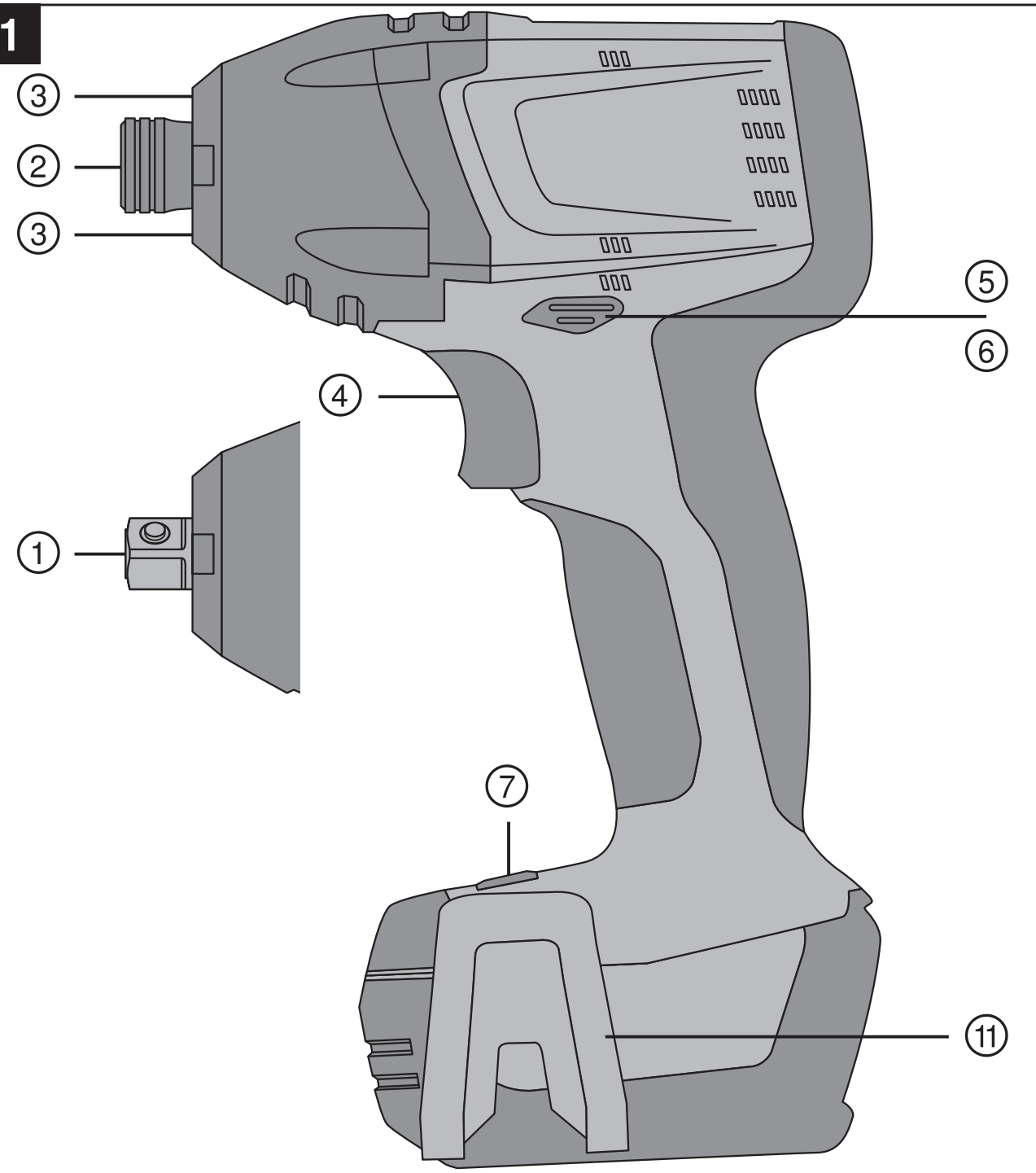

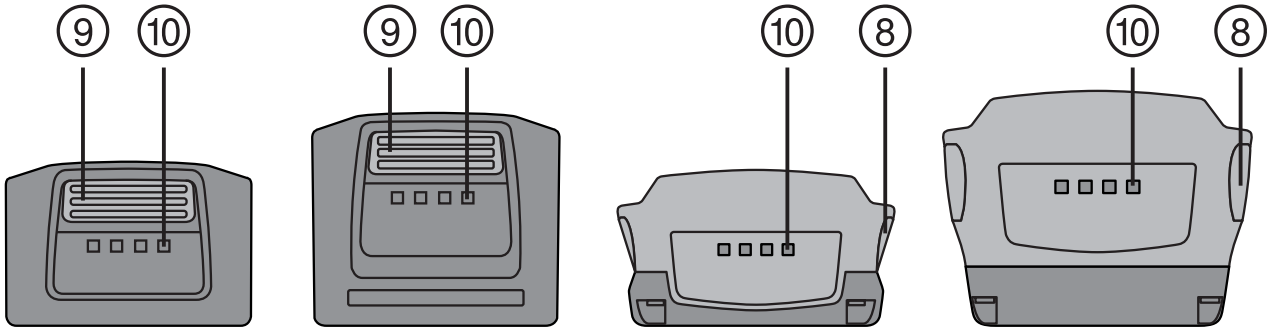

B14 1.6Ah

B14 3.3Ah

B18 1.6Ah

B18 2.6Ah
B18 3.3Ah

ETL listed to US and Canadian safety standards
Homologué ETL (conforme aux normes de sécurité américaines et canadiennes)
Producto homologado según normas de seguridad americanas y canadienses
Produto homologado de accordo com as normas de segurança americanas e canadianas

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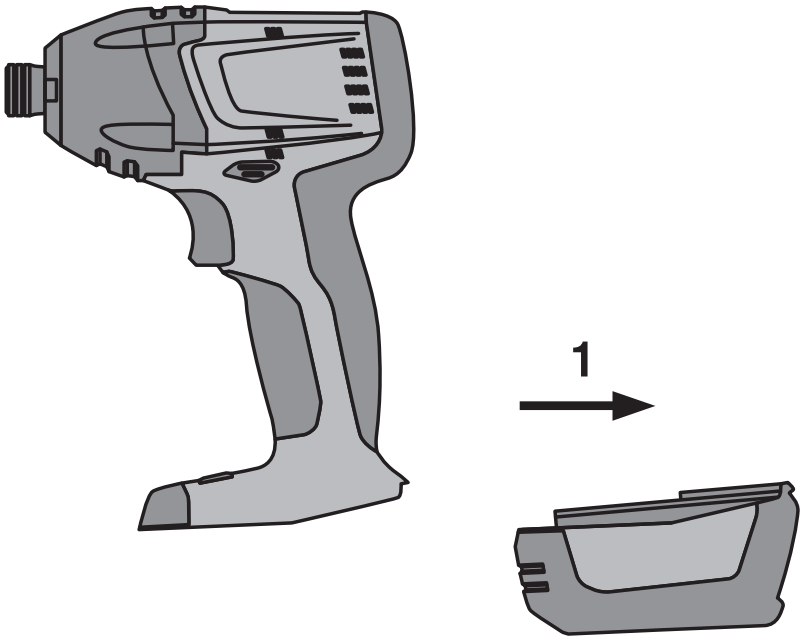

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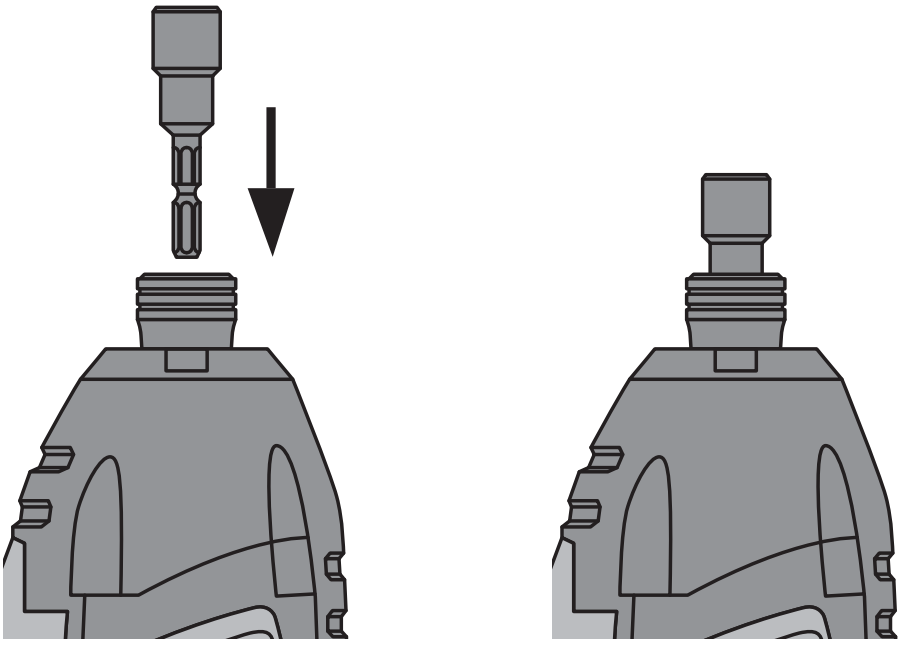

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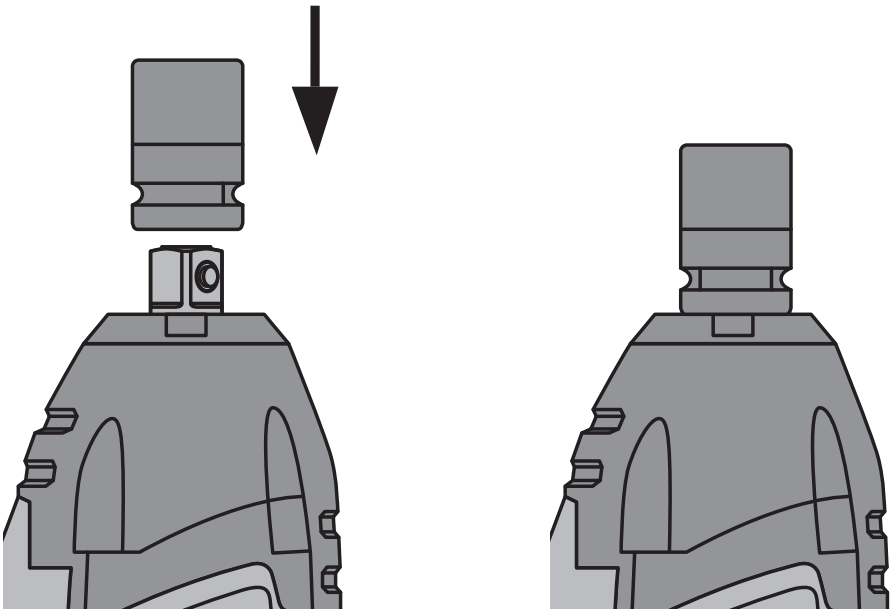

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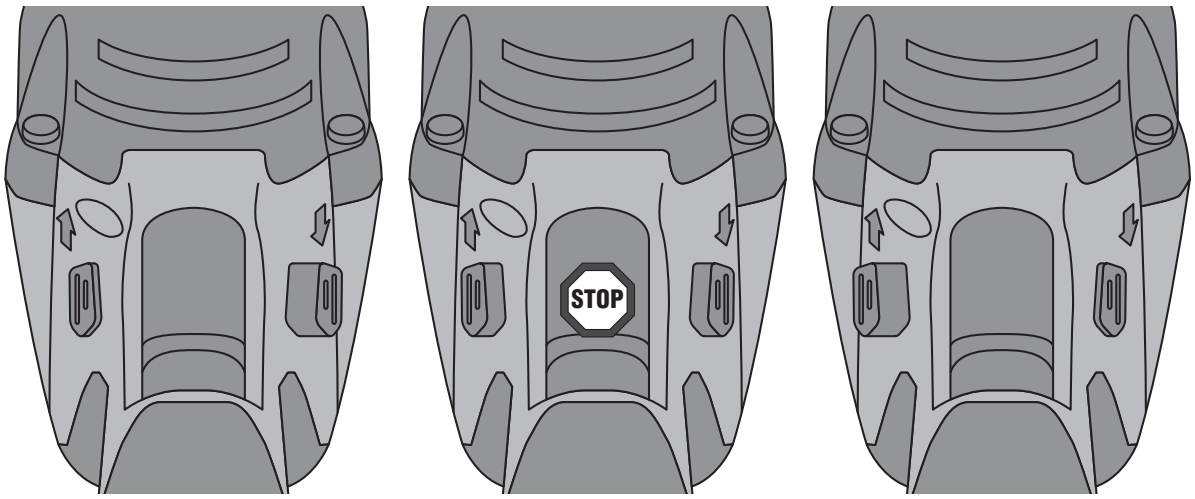

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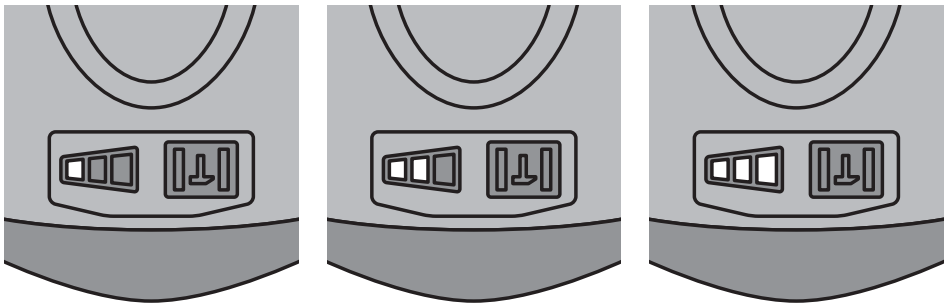

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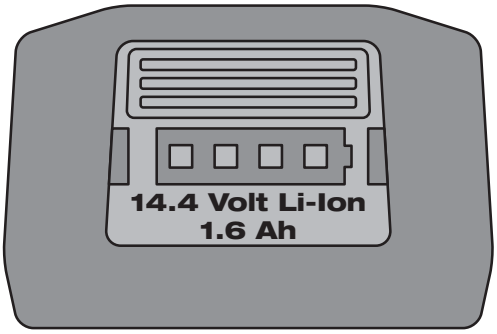

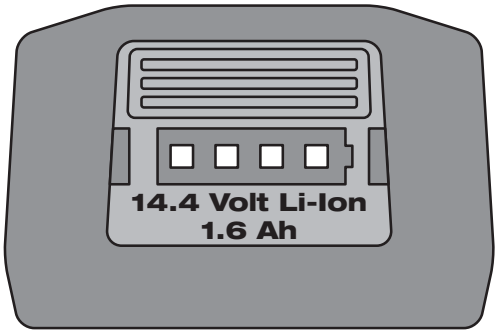

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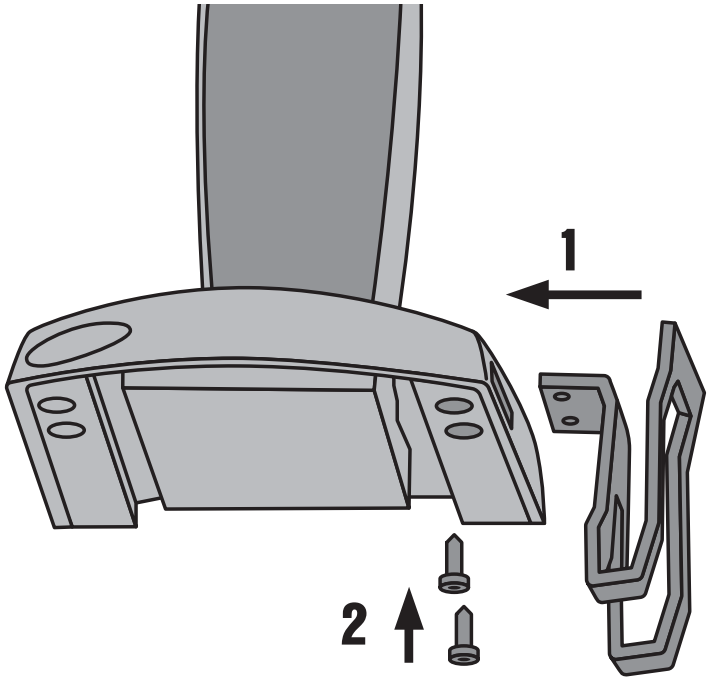

ORIGINAL OPERATING INSTRUCTIONS

SID 14-A / SID 18-A / SIW 14-A / SIW 18-A cordless impact driver/wrench

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It is essential that the operating instructions are read before the power tool is operated for the first time.

Always keep these operating instructions together with the power tool.

Ensure that the operating instructions are with the power tool when it is given to other persons.

Contents	Page
1. General information	1
2. Description	2
3. Insert tools, accessories	3
4. Technical data	4
5. Safety instructions	5
6. Before use	8
7. Operation	9
8. Care and maintenance	11
9. Troubleshooting	12
10. Disposal	12
11. Manufacturer's warranty - tools	13

1 These numbers refer to the corresponding illustrations. The illustrations can be found on the fold-out cover pages. Keep these pages open while studying the operating instructions.
In these operating instructions, the designation "the power tool" always refers to the SIW 14-A, SIW 18-A, SID 14-A or SID 18-A cordless impact wrench / screwdriver with battery fitted.

Operating controls and parts 1

① SIW square drive
② SID hex. socket drive
③ Light
④ Control switch (with electronic speed control)
⑤ Forward / reverse switch
⑥ Motor brake
⑦ Torque selector switch
⑧ SID/W 18-A battery release buttons
⑨ SID/W 14-A battery release button
⑩ Charge status and fault display (Li-ion battery)
⑪ Belt hook (optional)

1. General information

1.1 Safety notices and their meaning

DANGER
Draws attention to imminent danger that will lead to serious bodily injury or fatality.

WARNING
Draws attention to a potentially dangerous situation that could lead to serious personal injury or fatality.

CAUTION
Draws attention to a potentially dangerous situation that could lead to slight personal injury or damage to the equipment or other property.

NOTE
Draws attention to an instruction or other useful information.

1.2 Explanation of the pictograms and other information

Warning signs

General warning

Warning: electricity

Warning: caustic substances

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Obligation signs

Wear eye protection

Wear a hard hat

Wear ear protection

Wear protective gloves

Wear breathing protection

Symbols

Read the operating instructions before use

Return waste material for recycling.

Volts

Direct current

Rated speed under no load

Revolutions per minute

Revolutions per minute

Location of identification data on the power tool

The type designation can be found on the type identification plate and the serial number on the side of the motor housing. Make a note of this data in your operating instructions and always refer to it when making an enquiry to your Hilti representative or service department.

Type:

Generation: 01

Serial no.:

2. Description

2.1 Use of the product as directed

The SID 14-A, SIW 14-A, SID 18-A and SIW 18-A are hand-held cordless impact screwdrivers/wrenches. They are designed for driving and removing screws in wood, metal, masonry and concrete and for tightening and releasing nuts and bolts.

Working on materials hazardous to the health (e.g. asbestos) is not permissible.

Do not use the battery as a power source for other unspecified appliances.

Modification of the power tool or tampering with its parts is not permissible.

To avoid the risk of injury, use only genuine Hilti accessories and insert tools.

The power tool should not be used for applications that require a precise torque. For applications that require a precise torque or where only a special limited torque is permitted, there is a risk of over-tightening and damage to the screw or workpiece. For these types of application, use a tool with a predefined torque setting to prevent over-tightening.

Observe the information printed in the operating instructions concerning operation, care and maintenance.

The power tool is designed for professional use and may be operated, serviced and maintained only by trained, authorized personnel. This personnel must be informed of any special hazards that may be encountered. The power tool and its ancillary equipment may present hazards when used incorrectly by untrained personnel or when used not as directed.

The working environment may be as follows: construction site, workshop, renovation, conversion or new construction.

Nationally applicable industrial safety regulations must be observed.

2.2 The items supplied include (toolbox versions):

1 Power tool
1 Operating instructions
1 Hilti toolbox

2.3 The items supplied include (cardboard box versions):

1 Power tool
1 Operating instructions

2.4 Additional items required for operating the tool

B 18/1.6 Li-ion, B 18/2.6 Li-ion, B 18/3.3 Li-ion, B 14/1.6 Li-ion or B 14/3.3 Li-ion battery with C 4/36, C 4/36-ACS or C 4/36-ACS TPS charger.

2.5 Li-ion battery charge status

LEDs light constantly	LEDs blink	Charge status C
LED 1,2,3,4	-	C ≧ 75 %
LED 1,2,3	-	50 % ≦ C < 75 %
LED 1,2	-	25 % ≦ C < 50 %
LED 1	-	10 % ≦ C < 25 %
-	LED 1	C < 10 %

3. Insert tools, accessories

Designation	Short designation	Description
Bit holder		S-BH 50
Charger for Li-ion batteries	C 4/36-ACS	
Charger for Li-ion batteries	C 4/36	
Battery	B 14/3.3, B 14/1.6 Li-Ion	
Battery	B 18/1.6 Li-ion	
Battery	B 18/2.6 Li-ion	
Battery	B 18/3.3 Li-ion	

Designation	Description
Bits	Hex. bit, bit adapter, drill bits with hex. shank
Sockets	Impact wrench sockets

4. Technical data

Right of technical changes reserved.

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Power tool	SID 14-A	SIW 14-A	SID 18-A	SIW 18-A
Rated voltage	14.4 V	14.4 V	21.6 V	21.6 V
Weight (including battery and chuck)	1.3 kg (2.87 lb)	1.3 kg (2.87 lb)	1.5 kg (3.31 lb)	1.5 kg (3.31 lb)
Dimensions (L x W x H)	151 mm (5.94") x 81 mm (3.19") x 228 mm (8.98")	154 mm (6.06") x 81 mm (3.19") x 228 mm (8.98")	151 mm (5.94") x 94 mm (3.7") x 228 mm (8.98")	154 mm (6.06") x 94 mm (3.7") x 228 mm (8.98")
Rated no-load running speed, pos. I	0…1,000/min	0…1,000/min	0…1,000/min	0…1,000/min
Rated no-load running speed, pos. II	0…1,500/min	0…1,500/min	0…1,500/min	0…1,500/min
Rated no-load running speed, pos. III	0…2,500/min	0…2,300/min	0…2,500/min	0…2,300/min
Impact speed	Max. 3,100/min	Max. 3,400/min	Max. 3,450/min	Max. 3,500/min
Speed adjustment	Three settings	Three settings	Three settings	Three settings
Standard screws	M8 - M16	M8 - M16	M8 - M16	M8 - M16
High-strength screws	M6 - M12	M6 - M12	M6 - M12	M6 - M12
Chuck	¼" hex. socket with locking sleeve	½" square drive with ball-notch retention and ⅜" with locking ring	¼" hex. socket with locking sleeve	½" square drive with ball-notch retention and ⅜" with locking ring
Speed control	Electronic, by way of the control switch	Electronic, by way of the control switch	Electronic, by way of the control switch	Electronic, by way of the control switch
Forward / reverse	Electronic switch with interlock to prevent switching while running	Electronic switch with interlock to prevent switching while running	Electronic switch with interlock to prevent switching while running	Electronic switch with interlock to prevent switching while running
Deep discharge protection	Yes	Yes	Yes	Yes

NOTE
The torque selector switch can be used to select three torque settings.

Power tool	Position I	Position II	Position III
SID 14-A	50 Nm (37 lb/ft)	100 Nm (74 lb/ft)	150 Nm (111 lb/ft)
SIW 14-A (⅜" square drive)	65 Nm (48 lb/ft)	115 Nm (85 lb/ft)	160 Nm (118 lb/ft)
SIW 14-A (½" square drive)	80 Nm (59 lb/ft)	120 Nm (89 lb/ft)	185 Nm (136 lb/ft)

Power tool	Position I	Position II	Position III
SID 18-A	60 Nm (44 lb/ft)	110 Nm (81 lb/ft)	165 Nm (122 lb/ft)
SIW 18-A (⅜" square drive)	75 Nm (55 lb/ft)	120 Nm (89 lb/ft)	175 Nm (129 lb/ft)
SIW 18-A (½" square drive)	90 Nm (66 lb/ft)	135 Nm (100 lb/ft)	200 Nm (148 lb/ft)

Battery	B 14/1.6	B 14/3.3	B 18/1.6	B 18/2.6	B 18/3.3
Rated voltage	14.4 V	14.4 V	21.6 V	21.6 V	21.6 V
Battery capacity	1.6 Ah	3.3 Ah	1.6 Ah	2.6 Ah	3.3 Ah
Energy content	23.04 Wh	47.52 Wh	34.56 Wh	56.16 Wh	71.28 Wh
Weight	0.36 kg (0.79 lb)	0.58 kg (1.28 lb)	0.48 kg (1.06 lb)	0.78 kg (1.72 lb)	0.78 kg (1.72 lb)
Temperature monitoring	Yes	Yes	Yes	Yes	Yes
Type of cell	Lithium-ion	Lithium-ion	Lithium-ion	Lithium-ion	Lithium-ion
No. of cells	4	8	6	12	12

5. Safety instructions

NOTE
The safety rules in section 5.1 contain all general safety rules for power tools which, in accordance with the applicable standards, require to be listed in the operating instructions. Accordingly, some of the rules listed may not be relevant to this tool.

5.1 General power tool safety warnings

a) ⚠**WARNING**
Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. **Save all warnings and instructions for future reference.** The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

5.1.1 Work area safety

a) **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

5.1.2 Electrical safety

a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of

a cord suitable for outdoor use reduces the risk of electric shock.

f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

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5.1.3 Personal safety

a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.

b) **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.

d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.

f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.

g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

5.1.4 Power tool use and care

a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.

b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.

d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.

e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

5.1.5 Battery tool use and care

a) **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

b) **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

c) **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.

d) **Under abusive conditions, liquid may be ejected from the battery, avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.

5.1.6 Service

a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

5.2 Additional safety precautions

5.2.1 Personal safety

a) **Hold power tool by insulated gripping surfaces, when performing an operation where the fastener may contact hidden wiring.** Fasteners contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

b) **Wear ear protectors.** Exposure to noise can cause hearing loss.

c) **Use auxiliary handle(s), if supplied with the tool.** Loss of control can cause personal injury.

d) **Breathing protection must be worn if the power tool is used without a dust removal system for work that creates dust.**

e) **Improve the blood circulation in your fingers by relaxing your hands and exercising your fingers during breaks between working.**

f) **Avoid touching rotating parts. Switch the power tool on only after bringing it into position at the workpiece.** Touching rotating parts, especially rotating insert tools, may lead to injury.

g) **Activate the safety lock (forward / reverse switch in the middle position) before storing or transporting the power tool.**

h) **Children must be instructed not to play with the power tool.**

i) **The power tool is not intended for use by children, by debilitated persons or those who have received no instruction or training.**

j) **WARNING: Some dust created by grinding, sanding, cutting and drilling contains chemicals known to cause cancer, birth defects, infertility or other reproductive harm; or serious and permanent respiratory or other injury.** Some examples of these chemicals are: lead from lead-based paints, crystalline silica from bricks, concrete and other masonry products and natural stone, arsenic and chromium from chemically-treated lumber. Your risk from these exposures varies, depending on how often you do this type of work. **To reduce exposure to these chemicals, the operator and bystanders should work in a well-ventilated area, work with approved safety equipment, such as respiratory protection appropriate for the type of dust generated, and designed to filter out microscopic particles and direct dust away from the face and body. Avoid prolonged contact with dust. Wear protective clothing and wash exposed areas with soap and water.** Allowing dust to get into your mouth, eyes, or to remain on your skin may promote absorption of harmful chemicals.

5.2.2 Power tool use and care

a) **Secure the workpiece. Use clamps or a vice to secure the workpiece.** The workpiece is thus held more securely than by hand and both hands remain free to operate the power tool.

b) **Check that the insert tools used are compatible with the chuck system and that they are secured in the chuck correctly.**

c) **Ensure fastener and attachment will withstand the level of torque generated by the tool.** Excessive torque may overstress, strip or damage the fastener/attachment and possibly lead to personal injury.

5.2.3 Cordless tool use and care

a) **Ensure the switch is in the off position before inserting the battery pack.** Inserting the battery pack into a lamp that is switched on may dazzle you.

b) **Do not expose batteries to high temperatures or fire.** This presents a risk of explosion.

c) **Do not disassemble, squash or incinerate batteries and do not subject them to temperatures over 80°C.** A risk of fire, explosion or injury through contact with caustic substances may otherwise result.

d) **Avoid ingress of dampness.**Dampness may cause a short circuit resulting in a risk of burning injury or fire.

e) **Do not use batteries other than those approved for use with the applicable power tool or appliance.** Use of other batteries or use of the battery for purposes for which it is not intended presents a risk of fire and explosion.

f) **Observe the special instructions applicable to the transport, storage and use of Li-ion batteries.**

g) **Remove the battery before storing or transporting the power tool.**

h) **Avoid short-circuiting the battery. Check that the terminals on the battery and in the power tool**

are free from foreign objects before inserting the battery in the power tool. Short circuiting the battery terminals presents a risk of fire, explosion and chemical burns.

i) **Do not charge or continue to use damaged batteries (e.g. batteries with cracks, broken parts, bent or pushed-in and/or pulled-out contacts).**

j) If the battery gets too hot to touch, this may indicate that it is faulty. **Place the tool at a location where there is no risk of causing a fire (at least 3 meters away from flammable materials), where it can be kept under observation and allowed to cool. Contact Hilti Service after the battery has been allowed to cool.**

5.2.4 Electrical safety

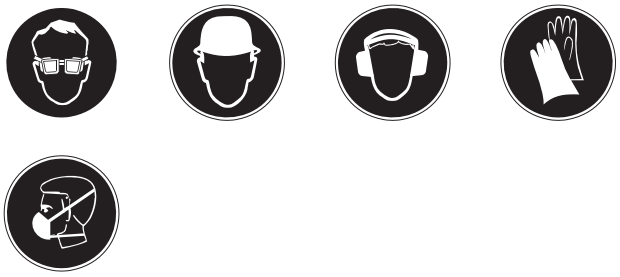
Before beginning work, check the working area (e.g. using a metal detector) to ensure that no concealed electric cables or gas and water pipes are present. External metal parts of the power tool may become live, for example, when an electric cable is damaged accidentally. This presents a serious risk of electric shock.

5.2.5 Work area

a) **Ensure that the workplace is well lit.**

b) **Ensure that the workplace is well ventilated.** Exposure to dust at a poorly ventilated workplace may result in damage to the health.

5.2.6 Personal protective equipment



The user and any other persons in the vicinity must wear ANSI Z87.1-approved eye protection, a hard hat, ear protection, protective gloves and breathing protection while the machine is in use.

6. Before use

6.1 Battery use and care

NOTE

Battery performance drops at low temperatures. Use the tool only after fully charging the battery. This ensures that maximum battery capacity is available. Change to a second battery as soon as a drop in performance is noticed. Recharge the battery immediately so that it is ready for reuse.

Store the battery in a cool, dry place. Never store the battery where it is exposed to direct sunlight or sources of heat, e.g. on heaters / radiators or behind a motor vehicle windscreen. Batteries that have reached the end of their life must be disposed of safely and correctly to avoid environmental pollution.

6.2 Charging the battery

DANGER

Only used the specified Hilti battery packs and Hilti battery chargers which are listed under "Accessories".

6.2.1 Charging a new battery for the first time

Charge the battery fully before using it for the first time.

6.2.2 Charging a previously used battery

Ensure that the outer surfaces of the battery are clean and dry before inserting it in the corresponding charger.

Read the operating instructions for the charger for further information about the charging procedure.
Lithium-ion battery packs are ready to use at any time, even when only partially charged. Charging progress is indicated by the LED display (see charger operating instructions).

6.3 Fitting the battery

CAUTION
Before fitting the battery, check that the power tool is switched off and that the safety lock is engaged (forward/reverse switch in the middle position). Use only the Hilti batteries approved for use with this power tool.

CAUTION
Check that the terminals on the battery and in the power tool are free from foreign objects before inserting the battery in the power tool.

1. Push the battery into the power tool from the rear as far as it will go and until it is heard to engage with a double click.
2. **CAUTION If it is not fitted securely, the battery could fall out while you are working with the tool.**
   CAUTION A falling battery may present a risk of injury to yourself or others.
   Before beginning the work, check that the battery is fitted securely to the tool.

6.4 Removing the battery 2

1. Press one or both release buttons.
2. Pull the battery out of the power tool toward the rear.

6.5 Transport and storage of battery packs

Pull the battery pack out of the locked position (working position) and move it into the first latching position (transport position).
If you disconnect a battery pack from the power tool for transport or storage, make sure that the contacts of the battery pack are not short-circuited. Remove loose metal parts such as screws, nails, clamps, loose screw bits, wires or metal swarf from the case, toolbox or transport container, or prevent these parts from coming into contact with the battery packs.
Observe national and international transport regulations when shipping battery packs (transportation by road, rail, sea or air).

7. Operation

7.1 Changing insert tools

CAUTION
Wear protective gloves when changing insert tools as the insert tools get hot during use.

Check that the connection end of the insert tool is clean. Clean the connection end if necessary.

7.1.1 Changing insert tools with the SID 14-A and SID 18-A 3

NOTE
The power tool is equipped with a ¼" hex. socket chuck with locking ring.

7.1.1.1 Fitting the screwdriving bit

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Push the bit into the chuck as far as it will go (until it engages).
   NOTE Alternatively, pull the ring on the chuck forward. Hold it securely in this position and then push the bit into the chuck as far as it will go before releasing the ring.

7.1.1.2 Removing the screwdriving bit

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Pull the locking ring on the chuck forward and hold it in this position.
3. Pull the screwdriving bit out of the chuck and then release the locking ring.

7.1.2 Changing insert tools with the SIW 14-A and SIW 18-A 4

NOTE

The power tool is equipped with two different chucks: ¹/₂" square drive with ball-notch retention or ³/₈" with locking ring

7.1.2.1 Fitting the socket

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Align the hole in the side of the socket with the retention ball on the square drive.
3. Push the socket onto the square drive until it engages.

7.1.2.2 Removing the socket

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Through the round hole in the side of the socket, press the retention ball into the square drive.
3. Pull the socket off the square drive.

7.2 Setting forward or reverse rotation 5

NOTE

The forward / reverse switch is used to select the direction of rotation of the drive spindle. An interlock prevents switching while the motor is running. The control switch is locked when the forward / reverse switch is in the middle position. Push the forward / reverse switch to the right (as seen in the working direction) for forward rotation. Push the forward / reverse switch to the left (as seen in the working direction) for reverse rotation.

NOTE

The power tool's working light is no substitute for good general illumination of the working area.

7.3 Torque selector switch 6

The torque selector switch can be used to set the torque to one of three settings (see Technical Data section).
Slide the switch to the desired torque setting.

7.4 Switching on / off

The speed of the power tool can be controlled smoothly (increased from minimum to maximum) by pressing the control switch gradually.

7.5 Driving screws and tightening bolts

7.5.1 Fitting the bit / bit holder

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Fit the appropriate insert tool in the chuck.

7.5.2 Screwdriving

WARNING

Ensure fastener and attachment will withstand the level of torque generated by the tool. Excessive torque may overstress, strip or damage the fastener/attachment and possibly lead to personal injury.

1. Set the forward / reverse switch to the desired direction of rotation.
2. Set the torque selector switch to the desired torque.

7.6 Reading the charge status LED display on Li-ion batteries 7

NOTE

The charge status cannot be indicated while the power tool is in operation. Indication is given (LED 1 blinks) only when the battery is fully discharged or when it is too hot (temperature above 80°C).

The Li-ion battery features a charge status LED display. The charge status is indicated by the LEDs on the battery during charging (please refer to the section "Li-ion battery charge status"). When the battery is at rest (not in use), its charge status is indicated by the four LEDs on the battery for a time of three seconds after pressing one of the battery release buttons.

7.7 Belt hook 8

CAUTION

Check that the belt hook is fitted securely before beginning work.

The belt hook allows the power tool to be attached to a belt worn by the operator. The belt hook can also be fitted to the other side of the power tool for use by left-handed persons.

1. Pull the battery out of the tool.
2. Fit the mounting plate into the guides provided.
3. Secure the belt hook with the two screws.

8. Care and maintenance

CAUTION

Before beginning cleaning, remove the battery from the power tool in order to prevent unintentional starting.

8.1 Care of insert tools

Clean off dirt and dust deposits adhering to the insert tools and protect them from corrosion by wiping the insert tools from time to time with an oil-soaked rag.

8.2 Care of the power tool

CAUTION

Keep the power tool, especially its grip surfaces, clean and free from oil and grease. Do not use cleaning agents which contain silicone.

The outer casing of the power tool is made from impact-resistant plastic. Sections of the grip are made from a synthetic rubber material.

Never operate the power tool when the ventilation slots are blocked. Clean the ventilation slots carefully using a dry brush. Do not permit foreign objects to enter the interior of the power tool. Clean the outside of the power tool at regular intervals with a slightly damp cloth. Do not use a spray, steam pressure cleaning equipment or running water for cleaning. This may negatively affect the electrical safety of the power tool.

8.3 Maintenance

WARNING

Repairs to the electrical section of the power tool may be carried out only by trained electrical specialists.

Check all external parts of the power tool for damage at regular intervals and check that all controls operate faultlessly. Do not operate the power tool if parts are damaged or when the controls do not function faultlessly. If necessary, the power tool should be repaired by Hilti Service.

8.4 Care of the Li-ion battery

Avoid entrance of moisture.

Charge the battery fully before using it for the first time.

In order to achieve maximum battery life, stop discharging the battery as soon as a significant drop in performance is noticed.

NOTE

If use of the power tool continues, further battery discharge will be stopped automatically before the battery cells suffer damage.

Charge the battery with the Hilti charger approved for use with Li-ion batteries.

NOTE

- A conditioning charge (as is required with NiCd or NiMH batteries) is not necessary.
- Interruption of the charging procedure has no negative effect on battery life.
- Charging can be started at any time with no negative effect on battery life. There is no memory effect (as with NiCd or NiMH batteries).
- For best results, batteries should be stored fully charged in a cool dry place. Avoid charging the battery in places subject to high ambient temperatures (e.g. at a window) as this has an adverse effect on battery life and increases the rate of self-discharge.
- If the battery no longer reaches full charge, it may have lost capacity due to aging or overstressing. It is possible to continue working with a battery in this condition but it should be replaced in good time.

8.5 Checking the power tool after care and maintenance

After carrying out care and maintenance work on the power tool, check that all protective and safety devices are fitted and that they function faultlessly.

9. Troubleshooting

Fault	Possible cause	Remedy
The power tool doesn't run.	The battery is discharged or fitted incorrectly.	The battery must be heard to engage with a double click or, respectively, needs to be charged.
	Electrical fault.	Remove the battery from the power tool and contact Hilti Service.
The on / off switch can't be pressed, i.e. the switch is locked.	The forward / reverse switch is in the middle position (transport lock engaged).	Push the forward / reverse switch to the left or right.
Running speed suddenly drops considerably.	The battery is discharged.	Change the battery and recharge the discharged battery.
The battery runs down more quickly than usual.	Battery condition is not optimal.	Have battery condition diagnosed by Hilti Service or replace with a new battery.
The battery doesn't engage with an audible click.	The retaining lugs on the battery are dirty.	Clean the retaining lugs and check that the battery engages securely. Contact Hilti Service if the problem persists.
The power tool or the battery become very warm.	Electrical fault.	Switch the power tool off immediately, remove the battery and contact Hilti Service.
	The power tool has been overloaded (application limits exceeded).	Use the right power tool for the job (don't use a low-powered tool for heavy work).

10. Disposal

CAUTION
Improper disposal of the equipment may have serious consequences: The burning of plastic components generates toxic fumes which may present a health hazard. Batteries may explode if damaged or exposed to very high temperatures, causing poisoning, burns, acid burns or environmental pollution. Careless disposal may permit unauthorized and improper use of the equipment. This may result in serious personal injury, injury to third parties and pollution of the environment.

CAUTION
Dispose of defective batteries without delay. Keep them out of reach of children. Do not attempt to open or dismantle batteries and do not dispose of them by incineration.

CAUTION
Dispose of the batteries in accordance with national regulations or return them to Hilti.

Most of the materials from which Hilti power tools or appliances are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, Hilti has already made arrangements for taking back your old power tools or appliances for recycling. Please ask your Hilti customer service department or Hilti representative for further information.

11. Manufacturer's warranty - tools

Hilti warrants that the tool supplied is free of defects in material and workmanship. This warranty is valid so long as the tool is operated and handled correctly, cleaned and serviced properly and in accordance with the Hilti Operating Instructions, and the technical system is maintained. This means that only original Hilti consumables, components and spare parts may be used in the tool.

This warranty provides the free-of-charge repair or replacement of defective parts only over the entire lifespan of the tool. Parts requiring repair or replacement as a result of normal wear and tear are not covered by this warranty.

Additional claims are excluded, unless stringent national rules prohibit such exclusion. In particular, Hilti is not obligated for direct, indirect, incidental or consequential damages, losses or expenses in connection with, or by reason of, the use of, or inability to use the tool for any purpose. Implied warranties of merchantability or fitness for a particular purpose are specifically excluded.

For repair or replacement, send the tool or related parts immediately upon discovery of the defect to the address of the local Hilti marketing organization provided.

This constitutes Hilti's entire obligation with regard to warranty and supersedes all prior or contemporaneous comments and oral or written agreements concerning warranties.

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WSR 18-A

Operating instructions en
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Manual de instrucciones es
Manual de instruções pt

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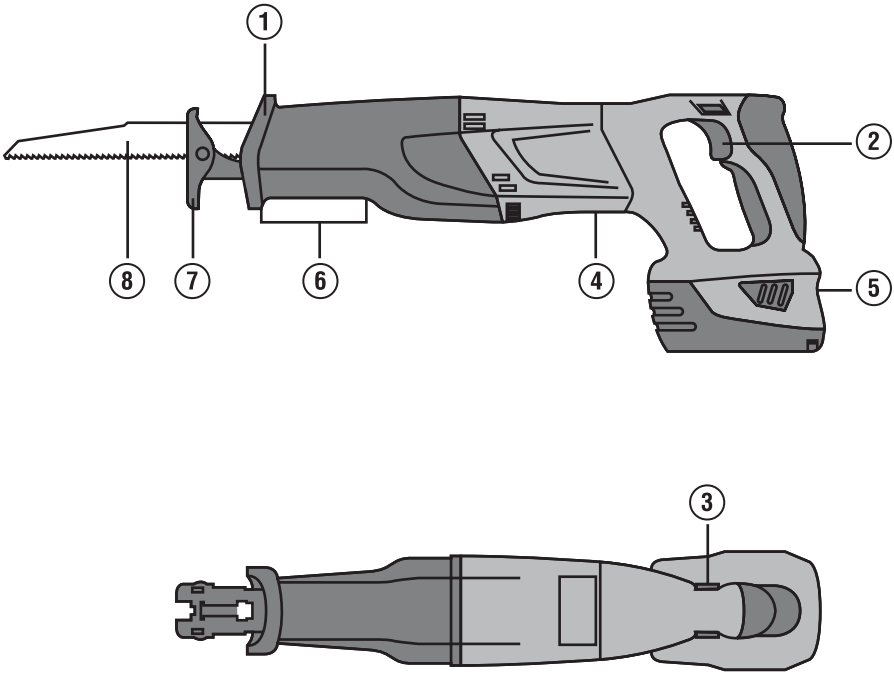

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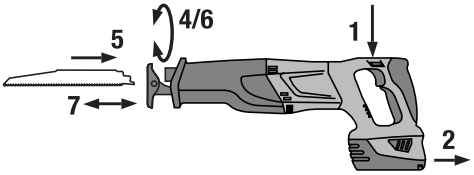

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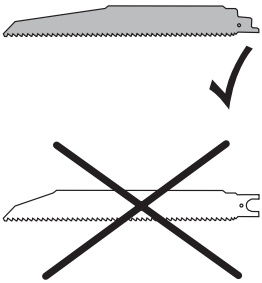

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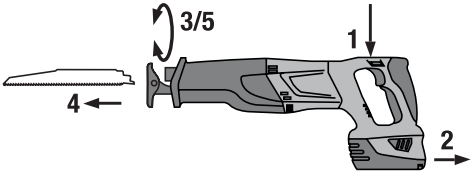

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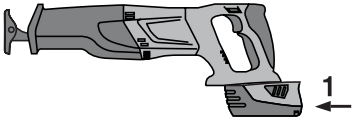

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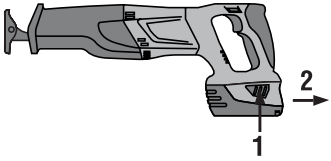

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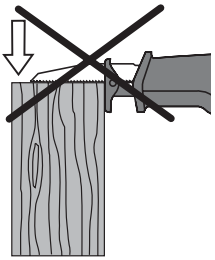

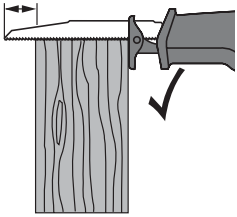

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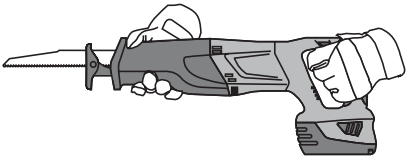

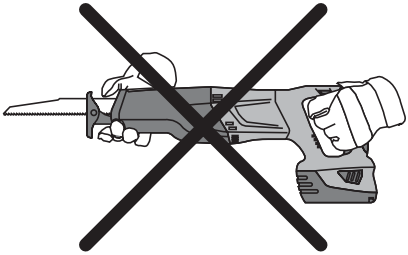

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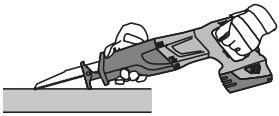

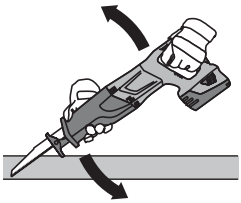

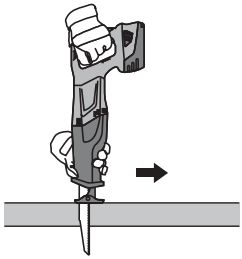

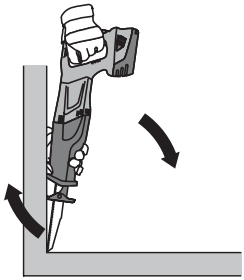

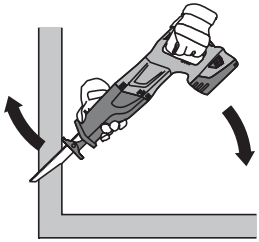

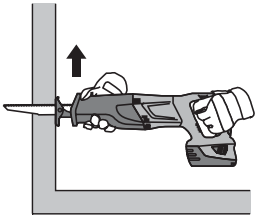

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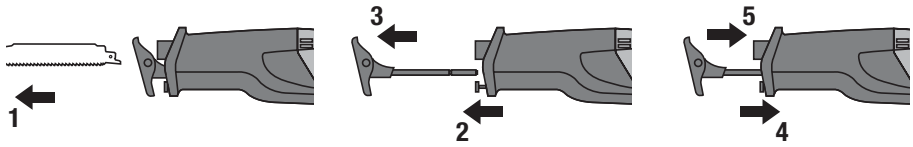


ORIGINAL OPERATING INSTRUCTIONS

WSR 18-A cordless reciprocating saw

en

It is essential that the operating instructions are read before the power tool is operated for the first time.

Always keep these operating instructions together with the power tool.

Ensure that the operating instructions are with the power tool when it is given to other persons.

Contents	Page
1. General information	1
2. Description	2
3. Spare parts	3
4. Accessories	4
5. Technical data	4
6. Safety instructions	4
7. Before use	8
8. Operation	9
9. Care and maintenance	11
10. Troubleshooting	12
11. Disposal	12
12. Manufacturer's warranty - tools	13

1 These numbers refer to the corresponding illustrations. The illustrations can be found on the fold-out cover pages. Keep these pages open while studying the operating instructions.
In these operating instructions, the designation "the power tool" always refers to the WSR 18-A cordless reciprocating saw.

Parts and operating controls 1

① Blade holder
② Control switch
③ Transport lock
④ Type identification plate
⑤ Battery
⑥ Forward gripping area (hand guard)
⑦ AVR contact shoe
⑧ Saw blade

1. General information

1.1 Safety notices and their meaning

DANGER
Draws attention to imminent danger that could lead to serious bodily injury or fatality.

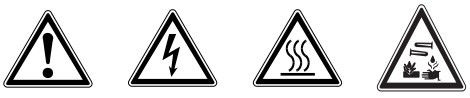
WARNING
Draws attention to a potentially dangerous situation that could lead to serious personal injury or fatality.

CAUTION
Draws attention to a potentially dangerous situation that could lead to slight personal injury or damage to the equipment or other property.

NOTE
Draws attention to an instruction or other useful information.

1.2 Explanation of the pictograms and other information

Warning signs



General warning | Warning: electricity | Warning: hot surface | Warning: caustic substances

en

Obligation signs

Wear eye protection

Wear a hard hat

Wear ear protection

Wear protective gloves

Wear breathing protection

Symbols

V
Volts

Direct current

/min
Strokes per minute

Read the operating instructions before use

Return waste material for recycling.

n_0
Stroke rate

Unlocked

Locked

Location of identification data on the power tool

The type designation and serial number can be found on the type identification plate on the machine or tool. Make a note of this data in your operating instructions and always refer to it when making an enquiry to your Hilti representative or service department.

Type:

Generation: 01

Serial no.:

2. Description

2.1 Use of the product as directed

The WSR 18-A is a cordless reciprocating saw for professional use. It is designed to be used for cutting wood, wood-like materials, metals and plastics. The power tool is suitable for use by right or left-handed persons. An ergonomically designed grip with synthetic rubber covering provides a comfortable, secure hold and makes the power tool less tiring to use.

The power tool is designed for two-handed operation.

Possible fields of use: Rescue services, public authorities, agriculture and forestry, construction sites, workshops, renovation, conversion and new construction, metal construction, timber construction, plumbing, heating and air conditioning system installation in which the types of cutting work listed above are carried out.

Do not use the power tool to cut bricks, concrete, cellular concrete, natural stone or tiles.

Do not use the power tool to cut pipes which still contain liquids.

Do not saw into unknown materials.

The power tool is designed for professional use and may be operated, serviced and maintained only by trained, authorized personnel. This personnel must be informed of any special hazards that may be encountered. The power tool and its ancillary equipment may present hazards when used incorrectly by untrained personnel or when used not as directed.
To avoid the risk of injury, use only genuine Hilti accessories and insert tools.
Working on materials hazardous to the health (e.g. asbestos) is not permissible.
Nationally applicable industrial safety regulations must be observed.
The power tool may be used only in a dry environment.
Do not use the power tool where there is a risk of fire or explosion.
Do not use the battery as a power source for other unspecified appliances.
Observe the information printed in the operating instructions concerning operation, care and maintenance.
Modification of the power tool or tampering with its parts is not permissible.

2.2 Switches

Control switch
Safety lock

2.3 Grips

Vibration-absorbing grip

2.4 Items supplied as standard

1 Power tool
1 Operating instructions
1 Hilti toolbox

2.5 Li-ion battery charge status

LEDs light constantly	LEDs blink	Charge status C
LED 1,2,3,4	-	C ≧ 75 %
LED 1,2,3	-	50 % ≦ C < 75 %
LED 1,2	-	25 % ≦ C < 50 %
LED 1	-	10 % ≦ C < 25 %
-	LED 1	C < 10 %
-	LED 1	Battery overheated

3. Spare parts

AVR contact shoe 1

7	AVR contact shoe	408847

4. Accessories

Saw blades		with ½" connection end
Charger for Li-ion batteries	C 4/36, C 4/36-ACS or C 4/36-ACS TPS	
Battery	B 18/2.6 Li-ion	
Battery	B 18/1.6 Li-ion	

5. Technical data

Right of technical changes reserved.

Power tool	**WSR 18-A**
Rated voltage (DC voltage)	21.6 V
Weight in accordance with EPTA procedure 01/2003	3.8 kg (8.38 lb)
Dimensions (L x W x H)	492 mm (19.37") x 96 mm (3.78") x 196 mm (7.72")
Stroke rate	0…3,000/min
Stroke	28 mm (1.1")
Blade holder	Keyless, for ¹/₂" standard blades

Battery	**B 18/2.6 Li-ion**	**B 18/1.6 Li-ion**
Rated voltage	21.6 V	21.6 V
Capacity	2.6 Ah	1.6 Ah
Energy capacity	56.16 Wh	34.56 Wh
Weight	0.78 kg (1.72 lb)	0.48 kg (1.06 lb)
Type of cell	Li-ion	Li-ion
Number of cells	12	6
Temperature monitoring during charging	Yes	Yes
Temperature monitoring during discharging	Yes	Yes

6. Safety instructions

NOTE
The safety rules in section 6.1 contain all general safety rules for power tools which, in accordance with the applicable standards, require to be listed in the operating instructions. Accordingly, some of the rules listed may not be relevant to this tool.

6.1 General Power Tool Safety Warnings

a) **WARNING! Read all safety warnings and instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. **Save all warnings and instruc-**

tions for future reference. The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

6.1.1 Work area safety

a) **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

6.1.2 Electrical safety

a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

6.1.3 Personal safety

a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
b) **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

6.1.4 Power tool use and care

a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the**

power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.

f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

6.1.5 Battery tool use and care

a) **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

b) **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

c) **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.

d) **Under abusive conditions, liquid may be ejected from the battery, avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.

6.1.6 Service

a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

6.2 Additional safety instructions

6.2.1 Personal safety

a) **Wear ear protectors.** Exposure to noise can cause hearing loss.

b) **Hold power tools by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and shock the operator.

c) **Always hold the power tool securely with both hands on the grips provided. Keep the grips dry, clean and free from oil and grease.**

d) **Breathing protection must be worn if the power tool is used without a dust removal system for work that creates dust.**

e) **Improve the blood circulation in your fingers by relaxing your hands and exercising your fingers during breaks between working.**

f) **Operate the power tool only as intended and when it is in faultless condition.**

g) **Wear protective gloves when changing insert tools as the insert tools get hot during use.**

h) **Switch the power tool on only after bringing it into the working position.**

i) **Engage the safety lock before storing or transporting the tool.**

j) **Avoid unintentional starting. Never carry the power tool with your finger on the control switch. Remove the battery from the power tool during work breaks, before carrying out maintenance, before changing cutting tools and before transporting the power tool.**

k) **Children must be instructed not to play with the power tool.**

l) **The power tool is not intended for use by children, by debilitated persons or those who have received no instruction or training.**

m) **WARNING: Some dust created by grinding, sanding, cutting and drilling contains chemicals known to cause cancer, birth defects, infertility or other reproductive harm; or serious and permanent respiratory or other injury.** Some examples of these chemicals are: lead from lead-based paints, crystalline silica from bricks, concrete and other masonry products and natural stone, arsenic and chromium from chemically-treated lumber. Your risk from these exposures varies, depending on how often you do this type of work. **To reduce exposure to these chemicals, the operator and bystanders should work in a well-ventilated area, work with approved safety equipment, such as respiratory protection appropriate for the type of dust generated, and designed to filter out microscopic particles and direct dust away from the face and body. Avoid prolonged contact with dust. Wear protective clothing and wash exposed areas with soap and water.** Allowing dust to get into your mouth,

eyes, or to remain on your skin may promote absorption of harmful chemicals.

6.2.2 Power tool use and care

a) **Secure the workpiece. Use clamps or a vice to secure the workpiece.** The workpiece is thus held more securely than by hand and both hands remain free to operate the power tool.

b) **Check that the insert tools used are compatible with the chuck system and that they are secured in the chuck correctly.**

6.2.3 Special safety instructions for reciprocating saws

a) **Always guide the power tool away from your body when working with it.**

b) **Never position your hands ahead of or on the saw blade.**

c) **Never cut into unknown materials and keep the line of cut above and below the workpiece free of obstacles.** If the saw blade strikes an object it may cause the power tool to kick back.

d) **Apply moderate pressure and set the power tool to a suitable stroke rate when using the pipe-cutting adapter (accessory), especially when cutting large-diameter pipes.** This will help to prevent the power tool overheating.

e) **The power tool must be pressed against the workpiece until the AVR contact shoe makes firm contact.** This helps ensure maximum safety and good performance.

f) **Wear suitable protective clothing to protect you from hot cuttings.**

g) **Never use the power tool without a fully functional hand guard.**

h) **Before beginning the work, check the hazard classification of the dust that will be produced. Use an industrial vacuum cleaner with an officially approved protection classification in compliance with locally applicable dust protection regulations.**

i) **WARNING!When cutting through pipes, e.g. when carrying out demolition or installation work, check to ensure that the pipes no longer contain liquids and empty them if necessary. When cutting through pipes, hold the power tool above the level of the pipe you are cutting through.** The power tool incorporates no protective measures to prevent ingress of water or dampness. Liquids running out of pipes may cause a short circuit in the power tool.

j) **Do not use the power tool to cut bricks, concrete, cellular concrete, natural stone or tiles.**

k) **Do not attempt to cut material thicker than the specified max. thickness for which the saw is designed and do not use unsuitable saw blades (reciprocating saw blades of the wrong size or not equipped with a ½" connection end).**

l) **The transport lock should always be engaged when the power tool is not in use.**

6.2.4 Battery tool use and care

a) **Observe the special instructions applicable to the transport, storage and use of Li-ion batteries.**

b) **Do not expose batteries to high temperatures or fire.** This presents a risk of explosion.

c) **Do not disassemble, squash or incinerate batteries and do not subject them to temperatures over 80°C.** A risk of fire, explosion or injury through contact with caustic substances may otherwise result.

d) **Do not use batteries other than those approved for use with the applicable power tool or appliance.** Use of other batteries or use of the battery for purposes for which it is not intended presents a risk of fire and explosion.

e) **Do not charge or continue to use damaged batteries (e.g. batteries with cracks, broken parts, bent or pushed-in and/or pulled-out contacts).**

f) **Use only the Hilti chargers listed under "Accessories".**

g) **Ensure that the outer surfaces of the battery are clean and dry before inserting it in the corresponding charger. Read the operating instructions for the charger for further information about the charging procedure.**

6.2.5 Electrical safety

Before beginning work, check the working area (e.g. using a metal detector) to ensure that no concealed electric cables or gas and water pipes are present. External metal parts of the power tool may become live, for example, when an electric cable is damaged accidentally. This presents a serious risk of electric shock.

6.2.6 Work area safety

Ensure that the workplace is well ventilated. Exposure to dust at a poorly ventilated workplace may result in damage to the health.

6.2.7 Personal protective equipment

The user and any other persons in the vicinity must wear suitable eye protection, a hard hat, ear protection, protective gloves and breathing protection while the tool is in use.

7. Before use

DANGER
Wear protective gloves when changing insert tools as the insert tools get hot during use.

7.1 Changing the saw blade

CAUTION
Wear protective gloves. The cutting edges of the saw blade teeth are sharp. The cutting edges may present a risk of injury.

7.1.1 Fitting the saw blade 2 3

1. Engage the transport lock.
2. Pull the battery out of the power tool.
3. Check that the connection end of the blade is clean and lightly greased. Clean it and grease it if necessary.
   NOTE Use only saw blades equipped with a ½" connection end (fig. 3).
4. Turn the blade holder locking sleeve counterclockwise and hold it in this position.
5. Push the saw blade into the blade holder from the front end of the tool.
6. Release the locking sleeve and allow it to return to its original position with a “click”.
7. Grip and pull the saw blade to check that it is locked in position.

7.1.2 Removing the saw blade 4

1. Engage the transport lock.
2. Pull the battery out of the power tool.
3. Turn the blade holder locking sleeve counterclockwise and hold it in this position.
4. Pull the blade forward out of the blade holder.
5. Release the locking sleeve and allow it to move back to its original position.

7.2 Battery use and care

NOTE
Battery performance drops at low temperatures. Never use the battery until the cells become fully discharged. Change to the second battery as soon as a drop in performance is noticed. Recharge the battery immediately so that it is ready for reuse.

Store the battery in a cool, dry place. Never store the battery where it is exposed to direct sunlight or sources of heat, e.g. on heaters / radiators or behind a motor vehicle windscreen. Batteries that have reached the end of their life must be disposed of safely and correctly to avoid environmental pollution.

7.3 Charging the battery

DANGER
Use only the Hilti batteries and Hilti chargers listed under "Accessories".

7.3.1 Charging a new battery for the first time

A new battery must be charged correctly for the first time before use. This will ensure that the cells form correctly. Incorrect initial charging may have a permanent, negative effect on battery capacity. Please refer to the applicable battery charger's operating instructions for information about initial charging.

7.3.2 Recharging a battery

Ensure that the outer surfaces of the battery are clean and dry before inserting it in the corresponding charger.
Read the operating instructions for the charger for further information about the charging procedure.
Li-ion batteries are ready for use at any time, even when only partly charged. Charging progress is indicated by the LED display (see charger operating instructions).

7.4 Fitting the battery 5

DANGER
Use only the Hilti batteries and Hilti chargers listed under "Accessories".

CAUTION
Check that the terminals on the battery and in the power tool are free from foreign objects before inserting the battery in the power tool.

1. Push the battery into the power tool from the rear until it is heard to engage with a double click.
2. **CAUTION A falling battery may present a risk of injury to yourself or others.**
   Check that the battery is seated securely in the power tool.

7.5 Removing the battery 6

1. Press both battery release buttons.
2. Pull the battery out of the power tool toward the rear.

7.6 Transport and storage of battery packs

Pull the battery pack out of the locked position (working position) and move it into the first latching position (transport position).
If you disconnect a battery pack from the power tool for transport or storage, make sure that the contacts of the battery pack are not short-circuited. Remove loose metal parts such as screws, nails, clamps, loose screw bits, wires or metal swarf from the case, toolbox or transport container, or prevent these parts from coming into contact with the battery packs.
Observe national and international transport regulations when shipping battery packs (transportation by road, rail, sea or air).

8. Operation

NOTE
To ensure good cutting performance and minimize stress on the power tool, use only saw blades that are in good condition.

CAUTION
Do not overload the power tool. It will work more efficiently and more safely within its intended performance range.

CAUTION
Wear protective glasses and a dust mask. The sawing operation swirls up dust and wood chips into the air. The dust and wood chips may be harmful to the eyes and respiratory system.

CAUTION
Dusts are hazardous to the health and can cause respiratory or skin diseases and allergic reactions.

WARNING
Certain dusts are considered to be carcinogenic (cause cancer). These include mineral dust as well as

oak and/or beech wood dust, particularly in conjunction with additional substances used for the treatment of wood (chromate, wood preservatives).

CAUTION
Wear ear protectors. The power tool and the sawing operation generate noise. Exposure to noise can cause hearing loss.

CAUTION
Wear protective gloves. The cutting edges of the saw blade teeth are sharp. The cutting edges may present a risk of injury.

CAUTION
Always guide the power tool away from your body when working with it.

CAUTION
Do not lift the power tool away from the workpiece until it has stopped completely.

CAUTION
Lay the power tool down only when it has come to a complete stop.

CAUTION
The saw blade gets hot during intensive use. **Wear protective gloves.** Contact with the saw blade presents a risk of burning injury.

8.1 Safe operation 7 8 9

DANGER
The power tool must be pressed against the workpiece until the AVR contact shoe makes firm contact. This helps ensure maximum safety and good performance.

DANGER
Always use saw blades that project beyond the workpiece over the entire length of the blade stroke. This will help to avoid violent kickback.

WARNING
Always hold the power tool securely with both hands on the grips provided. Never use the power tool without a fully functional hand guard. The blade holder presents a risk of injury.

8.2 Switching on

1. Disengage the transport lock.
2. Press the control switch.

8.3 Switching off

1. Release the control switch.
2. Engage the transport lock.

8.4 Plunge cutting 10

CAUTION
Apply the appropriate safety measures at the rear of the workpiece when plunge sawing. Use only suitable saw blades (length as short as possible).

Use the plunge cutting technique only on soft materials. It takes a little practice to start the cut, without previously drilling a starting hole, by plunging the blade into the surface while the power tool is running. This is possible only with short saw blades. For plunge cutting, the power tool may be used either in the normal position or in the reversed position.

1. Bring the forward edge of the AVR contact shoe into contact with the surface of the material to be cut.
2. Disengage the transport lock.
3. Press the control switch.
4. Press the forward edge of the contact shoe against the surface and begin the plunge action by slowly increasing the angle of attack. To prevent stalling, it is important that the power tool is running before the saw blade is brought into contact with the surface.
5. Once the saw blade has penetrated right through the material, bring the power tool into the normal working position (AVR contact shoe flush with the workpiece) and then continue sawing along the cutting line.

9. Care and maintenance

CAUTION

Before beginning cleaning, remove the battery from the power tool in order to prevent unintentional starting.

9.1 Care and maintenance

Keep the blades clean, especially their connection ends, in order to ensure trouble-free operation of the blade holder.

Keep the blade holder clean.

The power tool has been adequately lubricated during assembly. After a long period of heavy use it is recommended that the power tool is inspected by Hilti. This will help to extend the life of the power tool and avoid unnecessary repair costs.

9.2 Care of the power tool

CAUTION

Keep the power tool, especially its grip surfaces, clean and free from oil and grease. Do not use cleaning agents which contain silicone.

The outer casing of the power tool is made from impact-resistant plastic. Sections of the grip are made from a synthetic rubber material.

Never operate the power tool when the ventilation slots are blocked. Clean the ventilation slots carefully using a dry brush. Do not permit foreign objects to enter the interior of the power tool. Clean the outside of the power tool at regular intervals with a slightly damp cloth. Do not use a spray, steam pressure cleaning equipment or running water for cleaning. This may negatively affect the electrical safety of the power tool.

9.3 Care of the Li-ion battery

Avoid entrance of moisture.

Charge the battery fully before using it for the first time.

In order to achieve maximum battery life, stop discharging the battery as soon as a significant drop in performance is noticed.

NOTE

If use of the power tool continues, further battery discharge will be stopped automatically before the battery cells suffer damage.

Charge the battery with the Hilti charger approved for use with Li-ion batteries.

NOTE

- A conditioning charge (as is required with NiCd or NiMH batteries) is not necessary.
- Interruption of the charging procedure has no negative effect on battery life.
- Charging can be started at any time with no negative effect on battery life. There is no memory effect (as with NiCd or NiMH batteries).
- For best results, batteries should be stored fully charged in a cool dry place. Avoid charging the battery in places subject to high ambient temperatures (e.g. at a window) as this has an adverse effect on battery life and increases the rate of self-discharge.
- If the battery no longer reaches full charge, it may have lost capacity due to aging or overstressing. It is possible to continue working with a battery in this condition but it should be replaced in good time.

9.4 Maintenance

WARNING

Repairs to the electrical section of the power tool may be carried out only by trained electrical specialists.

Check all external parts of the power tool for damage at regular intervals and check that all controls operate faultlessly. Do not operate the power tool if parts are damaged or when the controls do not function faultlessly. If necessary, the power tool should be repaired by Hilti Service.

9.5 Changing the AVR contact shoe 11

The AVR contact shoe can be changed when required. Before changing the contact shoe, engage the transport lock and remove the battery from the power tool.

1. Engage the transport lock.
2. Remove the battery.
3. Remove the saw blade.
4. Pull the rectangular plastic pin forward. It is located between the two AVR contact shoe guide pins.
5. Pull the AVR contact shoe out.

6. Push the rectangular plastic part back into its original position.
7. Grease the AVR contact shoe lightly and insert it fully in the guides.
8. Check to ensure that the contact shoe engages correctly.

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9.6 Checking the power tool after care and maintenance

After carrying out care and maintenance work on the power tool, check that all protective and safety devices are fitted and that they function faultlessly.

10. Troubleshooting

Fault	Possible cause	Remedy
The power tool doesn't start.	The control switch is defective.	Have it checked by a trained electrical specialist and replaced if necessary.
	The battery is discharged or fitted incorrectly.	The battery must be heard to engage with a double click or, respectively, needs to be charged.
	The transport lock is engaged.	Disengage the transport lock.
The power tool doesn't achieve full power.	The control switch is not pressed fully.	Press the control switch as far as it will go.
	The battery is discharged.	Change the battery and recharge the discharged battery.
The saw blade can't be removed from the blade holder.	The locking sleeve is not turned as far as it will go.	Turn the locking sleeve as far as it will go and remove the saw blade.

11. Disposal

CAUTION
Improper disposal of the equipment may have serious consequences: The burning of plastic components generates toxic fumes which may present a health hazard. Batteries may explode if damaged or exposed to very high temperatures, causing poisoning, burns, acid burns or environmental pollution. Careless disposal may permit unauthorized and improper use of the equipment. This may result in serious personal injury, injury to third parties and pollution of the environment.

CAUTION
Dispose of defective batteries without delay. Keep them out of reach of children. Do not attempt to open or dismantle batteries and do not dispose of them by incineration.

CAUTION
Dispose of the batteries in accordance with national regulations or return them to Hilti.

Most of the materials from which Hilti power tools or appliances are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, Hilti has already made arrangements for taking back your old power tools or appliances for recycling. Please ask your Hilti customer service department or Hilti representative for further information.

Batteries

Hilti Li-ion batteries contain lithium-ion cells.

Both you and Hilti bear responsibility for the recycling of worn-out batteries in keeping with environmental protection requirements.

Do not throw worn-out batteries into household waste, a fire or water.

12. Manufacturer's warranty - tools

Hilti warrants that the tool supplied is free of defects in material and workmanship. This warranty is valid so long as the tool is operated and handled correctly, cleaned and serviced properly and in accordance with the Hilti Operating Instructions, and the technical system is maintained. This means that only original Hilti consumables, components and spare parts may be used in the tool.

This warranty provides the free-of-charge repair or replacement of defective parts only over the entire lifespan of the tool. Parts requiring repair or replacement as a result of normal wear and tear are not covered by this warranty.

Additional claims are excluded, unless stringent national rules prohibit such exclusion. In particular, Hilti is not obligated for direct, indirect, incidental or consequential damages, losses or expenses in connection with, or by reason of, the use of, or inability to use the tool for any purpose. Implied warranties of merchantability or fitness for a particular purpose are specifically excluded.

For repair or replacement, send the tool or related parts immediately upon discovery of the defect to the address of the local Hilti marketing organization provided.

This constitutes Hilti's entire obligation with regard to warranty and supersedes all prior or contemporaneous comments and oral or written agreements concerning warranties.

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